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Educational Shortages in the Bookkeeping Courses of Study in the Indianapolis Public High Schools in 1942

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EDUCATIONAL SHORTAGES IN THE BOOKKEEPING
COURSES OF STUDY IN THE INDIANAPOLIS
PUBLIC HIGH SCHOOLS IN 1942

by

WILBUR STOVER BARNHART

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CHAPTER I

INTRODUCTION

Purposes of the Study

Revision of a bookkeeping course of study.--The major purpose of this investigation is to make a limited but definite contribution to the task of revising the course of study in bookkeeping for the Indianapolis high schools. The contribution is intended to consist of an appraisal of the content of the course of study in bookkeeping. It is not the purpose of the investigation to discover methods which are best suited to the teaching of the subject, but merely to aid in determining the optimum content of the courses.

It is possible that some topics now included in the course of study may have become obsolete, and that other topics may be of such slight significance that they should be eliminated. On the other hand, there may be other topics not now included which should be added.

Testing a Technique of Community Cooperation.--A minor purpose of the investigation will be realized if the experiment reveals the extent to which groups of adult citizens respond to certain types of requests for aid in formulating the policies and curriculum of the public high schools. If the technique of this investigation is successful, the same procedure might well

be followed in appraising the courses of study in other vocational subjects.

To ask an individual whether or not bookkeeping should be included in the curriculum of the public high school is a very simple matter and the answer requires very little deliberation. To ask a busy executive to contemplate the numerous items of a course of study, to look for omissions, and to analyze tasks and duties of actual workers; and then to report the results of his study to school officials, is a more difficult matter. Will business and professional men respond in adequate measure to such a request?

That the schools and the community should work together in this manner is the opinion of a committee of the American Youth Commission which included the following suggestion in a recent report:

It has been pointed out in a number of recent discussions of the secondary schools that they ought to take the same interest in their products that a conscientious industrial establishment takes in its output. The schools ought to be prepared to describe in perfectly explicit terms what a young person is capable of doing, and ought to stand by him with advice and assistance until he finds a place in the adult world.¹

There is obviously some reticence on the part of educators in asking for the assistance and advice of school patrons. For the encouragement of such practices the special committee quoted above advocates not only the distribution of inquiry

¹The American Youth Commission, What the High Schools Ought to Teach. A report prepared by a Special Committee on the Secondary School Curriculum. Washington: American Council on Education, 1940, p. 32.

sheets, but the actual formation of community councils for the study of curriculum problems. Here is further comment from the committee:

The best way to secure a complete understanding in every local community of modern demands on the schools is through the organization of community councils which will come together and discuss the problems of present-day youth. Some steps have been taken in certain centers to organize such councils, but the public in general is content to leave to boards of education the problems of the schools. Boards of education, in turn, find that they cannot expand schools without the support of the communities which they represent. As a result, educational interests drift along and changes are made very slowly or not at all.

What this country needs today is clear insight into the youth problem, willingness to marshal the most competent individuals to work out a new program of induction of youth into adulthood, prestige behind the findings of such a group of competent individuals, and a vigorous campaign that will make the plans for reform known to the American public.²

The establishment of techniques for securing such cooperation is one of the lesser, but withal a very important purpose of this study.

Method of the Study

Benefit of Expert Opinion.--In the principal phase of this investigation the technique used is quite similar to that applied by J. Marshall Hanna in his study of the fundamental issues in business education. Dr. Hanna sought the opinions of some ninety prominent business educators in his effort to determine what were the issues and the variation of opinions on these issues.³

²Ibid., p. 35.

³J. Marshall Hanna, Fundamental Issues in Business Education (A portion of the author's Doctor's thesis, School of Education, New York University) Cincinnati: South-Western Publishing Company, 1940.

In this present study the topics of instruction in the Indianapolis high school courses in bookkeeping were submitted to carefully selected individuals (see Chapter IV) who could, by reason of professional and business standing, be described as experts in their understanding of bookkeeping and accounting problems. These individuals were asked to evaluate the topics by rating each one under one of the following heads:

- 1.-- if the topic is essential and should, in your opinion, be studied in high school.
- 2.-- if the topic is essential, but is better learned on the job.
- 3.-- if the topic is not essential, but could be studied in high school with profit.
- 4.-- if the topic has no value and should not be taught in high school bookkeeping classes.

In addition to this original investigation, due regard was given to similar investigations in this field and to the opinions of business educators generally as reported in books and in current literature.

Limitations of the Study

Findings Based on Judgment and Opinion.--It must be noted at the outset that the formulation of a course of study in any subject is quite a subjective process. In this case, the findings must be evaluated in the light of the fact that they represent the judgment of individuals, seasoned and deliberate though they be.

Haynes and Humphrey clearly recognized the necessity for applying philosophical methods of research to the problem of planning courses of study when they wrote:

In reaching conclusions in most studies, the subjective element is necessary, notwithstanding that objectivity is one of the prime requisites of research work. This is accounted for by the fact that philosophy deals with phenomena and laws applied to situations that do not always lend themselves to exact adaptations. . . . Studies dealing with matters concerned with curriculum placement, specific content elements to be included in each course of study, and other felt difficulties can be assisted materially by philosophy applied to education in general and to business education in particular.⁴

It is to be expected, therefore, that the stated and significant opinion of a group of experts might properly be invalidated by such philosophical reasoning based on factors of logic and methodology.

Findings Based on Assumptions.--A second limitation which must be considered in studies of this kind is the necessity for making certain assumptions as to the objectives of the course, the grade placement, and the proper length of the course. Some of these assumptions may not be adequately proved and validated.

It is assumed that the principal objective of a high-school course in bookkeeping is to prepare the student for vocational proficiency. This assumption is supported by the findings of Dr. Hanna. In his investigation of the opinions of ninety prominent business educators in the United States on the major objectives of first-year bookkeeping in secondary schools, he concluded as follows:

The majority of our responding educators believe the major function of elementary bookkeeping is a combination

⁴Benjamin R. Haynes and Clyde W. Humphrey, Research Applied to Business Education. Chicago: The Gregg Publishing Company, 1939. pp. 67-8.

of basic background for advanced bookkeeping and general business information of a social, consumer, and personal-use nature.⁵

In speaking of the objectives of the bookkeeping course, Haynes and Humphrey refer to the need for research and offer the following interpretation of aims:

More investigation into the subject of bookkeeping will aid in an intelligent solution of the problem. If its value lies in the general business information presented, then research is necessary so that the material presented may be as rich as possible in social value. If, on the other hand, it is a purely vocational subject, actual facts as to opportunities for beginners and their duties in their first positions are essential. If, as is probably the case, it partakes of both the values claimed for it, research will help to provide material that may be used to enrich the course.⁶

Dr. Hanna said, "Writers in this field almost universally conclude that the second year of high school bookkeeping should be entirely vocational."⁷

Another recent pronouncement on objectives follows:

. . . . the student who registers for the accounting curriculum is undoubtedly planning to earn a living in this line of endeavor; hence, his training should be geared to make him vocationally proficient in the bookkeeping field. What should be taught to the accounting major to make him vocationally competent is the most important question in accounting curriculum revision.⁸

While the vocational objective is assumed to be the major one, there are certainly minor objectives, such as those mentioned

⁵J. Marshall Hanna, op. cit., pp. 23-24.

⁶Haynes and Humphrey, op. cit., p. 40.

⁷J. Marshall Hanna, op. cit., p. 23.

⁸Morris S. Goller, "Revising the Teaching of Bookkeeping and Accounting in a New Accounting Curriculum," Business Education for Tomorrow. Fourteenth Yearbook of the Eastern Commercial Teachers Association, John G. Kirk, President. Philadelphia: Eastern Commercial Teachers Association, 1941, p. 109.

by Haynes and Humphrey above⁹ which must be taken into consideration in developing the course of study.

Course of Study Standards and Criteria.--By the very wording of the questionnaire, the cooperating individuals were asked to assume a vocational objective for the bookkeeping course. This means that the final interpretations are limited to that area and should be so applied in the construction of a new course of study.

Important as the vocational objective might be, due consideration must be given in the final drafting of the course of study to criteria established by Professor Herbert B. Bruner and the staff in charge of the curriculum laboratory at Teachers College, Columbia University.¹⁰

A study of the standards established by the curriculum laboratory reveals that a course of study based solely on the vocational aim might be quite unacceptable. This fact must be recognized in appraising the value of the findings of this study. On the other hand, many of the criteria set up by Dr. Bruner and his associates seem to be specific in their application to the aims and content of a vocational bookkeeping course of study. The following quotations from the statements of the criteria are consistent with the findings of this investigation:

⁹Haynes and Humphrey, op. cit., p. 40.

¹⁰Herbert B. Bruner et. al., What Our Schools Are Teaching, New York: Bureau of Publications, Teachers College, Columbia University, 1941.

"I Philosophy

"A Social Philosophy.

- "2. Is it recognized that institutions should be continually modified as new situations demand and as we achieve better insights and understandings?
- "6. Is the school recognized as a conscious agency for social improvement?

"B Educational Philosophy

- "1. Is the curriculum thought of as including all the activities of pupils (both in and out of school) over which the school exercises a directing influence?
- "2. Is significance attached to relationships existing between the pupil and his environment?
- "3. Is the course of study considered a suggestive guide rather than a rigid outline of materials to be taught?

"C Principles of Learning.

- "4. Are provisions made for taking into consideration the underlying principles of integration?
- "10. Is there provision for making the situations of the school real?

"II Activities.

"D Social Values.

- "The activities must provide experiences which, by meeting the demands of an ever-changing dynamic society, will help the pupil to be a more valuable member of that society.
- "5. Is provision made for the consideration of the opinions and suggestions of others?
.

"III Content.

"C Adequacy and Significance

- "1. Are the materials of everyday significance to Society?¹¹

The foregoing criteria are copied here because they seem to apply so clearly to the teaching materials growing out of this study. Nevertheless, Wieting, in reporting on the evaluation of business education courses of study calls attention to the paucity of business courses which have been adjudged

¹¹ Ibid., pp. 211-220.

outstanding among the thousands of courses filed in all subjects with the curriculum laboratory. His analysis of the reason is as follows:

Very few commercial courses include a well formulated social or educational philosophy. While it is certain that all courses are prepared with some philosophy in mind it is true that business education leaders have often failed to think through a defensible point of view.¹²

This again is evidence of the limitations inherent in the content arrived at by the method and technique of this investigation.

Restatement of the Problem.--With this explanation, it may be stated in summary form that the purpose of the present study is to make an evaluation of the Indianapolis high school course of study in bookkeeping and to discover if any significant topics or units have been omitted or if insignificant topics are included. The results are accomplished through a questionnaire circulated among certain business and professional groups. This experiment will provide in itself a test of the readiness of such individuals to counsel with educators on course-of-study items.

The findings must be applied with full knowledge of certain inherent limitations. They are based on the personal judgment and opinion of competent people on certain assumptions which may not be fully proved, and which are incomplete in their adherence to accepted, authoritative criteria. Even with these limitations, it is expected that the results of the study can be used effectively in future revisions of the course of study.

¹²C. Maurice Wieting, "Recent Business Education Courses of Study," The Business Curriculum. (Sixth Yearbook of the National Commercial Teachers Federation) Bowling Green, Kentucky: National Commercial Teachers Federation, 1940. p. 203.

CHAPTER II

BOOKKEEPING AS A SUBJECT IN THE SECONDARY SCHOOL

Historical Review

Bookkeeping, the First Business Education Course.--There are certain inherent characteristics which have caused bookkeeping to persist as an offering of the secondary schools. It has been taught longer in secondary schools than any other business subject. Haynes and Jackson said:

Bookkeeping was first included in the curriculum of the English High School in Boston in 1823. The high school in New York in 1825 offered bookkeeping and arithmetic. Bookkeeping appeared in the curriculum of the Boston High School for Girls in 1826; in the Salem High School in 1836; in the high school at Portsmouth, New Hampshire, in 1836; at Cambridge, Massachusetts, in 1862; and at Concord, New Hampshire, in 1865.

Prior to 1875, bookkeeping was perhaps the only subject that could be classified as a business subject. The only other subjects which might possibly have been considered in this class were arithmetic, mensuration, and penmanship.¹

One of the characteristics of the subject of bookkeeping that has caused it to remain as a part of the curriculum of the secondary school is its adaptability to inductive development and deductive reasoning. Its regimen of written activities is ideally suited for good methodology. These are factors which would have justified the teaching of the subject even if there were no

¹Benjamin R. Haynes and Harry P. Jackson, A History of Business Education in the United States, p. 44. Cincinnati: The South-Western Publishing Company, 1935.

vocational objectives to strengthen its position in the secondary school.

The high school subjects which have consistently retained their places of importance throughout the entire period are algebra, bookkeeping, geometry, grammar, drawing, history, Latin, and literature. None of these have shown any significant changes.²

Educational Research in Bookkeeping

Research Studies in Bookkeeping Limited in Number.--

Probably because the subject of bookkeeping has become so well established and its content so fixed, there has been only a limited number of research studies in this field.

A report in 1938 listed 122 separate studies or investigations on the teaching of bookkeeping and stated that there were no recent studies made to determine ideal content of bookkeeping courses in secondary schools.³

Determining Ideal Content Through Job Analysis.--Connor

and Jones conducted one of the early job analyses (in Cleveland, Ohio) in 1927 in an effort to discover what materials should be included in the business education courses in the Cleveland schools.⁴

A similar technique was followed by Strumpf, who made a

²Douglas E. Lawson, Curriculum Development in City-School Systems, p. 229. Chicago: The University of Chicago Press, 1940.

³Summary of Research in Commercial Education, pp. 1-36. Eighth Yearbook of the Commercial Education Association of the City of New York and Vicinity. New York: The Altol Press, 1938.

⁴William L. Connor and Lloyd L. Jones, A Scientific Study in Curriculum Making for Junior Courses in Business Education. Chicago: The Gregg Publishing Company, 1929, pp. 111-144.

task analysis of bookkeeping jobs in 1926;⁵ by Eyster, in 1931;⁶ and by Skene in 1934.⁷

It is observed that these investigations produced so many skills and duties which are of no significance that the very mass of the data collected makes analysis and evaluation difficult. Unless the individuals selected for the making of the task analysis are carefully chosen as to type of business and other factors, the results are likely not to be representative. Finally, the method of performance, or even the task itself, may not be acceptable as good business practice. Merely because one or more firms perform a task, or perform it in a certain way, is no valid reason for teaching that task or method in the secondary schools.

Recent Issues and Trends.--A study of current literature on the subject of bookkeeping instruction in the secondary school reveals a great interest during the past ten years in the aims and objectives of the course. There has been much written about the non-vocational objectives of bookkeeping, and the so-called personal-use objectives have been widely advocated and discussed.

Harry I. Good, one of the advocates of personal-use bookkeeping, described these social objectives as follows:

⁵ Benjamin E. Strumpf, "Bookkeeping Duties and the Commercial Curriculum." Unpublished Doctor's Thesis, New York University, 1926.

⁶ Elvin S. Eyster, "An Analysis of the Duties of Bookkeepers." Unpublished Master's Thesis, Indiana University, 1931.

⁷ Etta C. Skene, "Occupational Analysis as a Basis of Bookkeeping Curricula of Public Secondary Schools." Unpublished Doctor's Thesis, New York University, 1934.

It is generally agreed that in addition to the development of vocational skills in bookkeeping and in the preparation of statements, other important results should be obtained in a one-year course in bookkeeping. Some of these results include the personal, social, cultural and economic values that may flow from a carefully planned course in bookkeeping. These results may be obtained without in any way destroying or reducing the attention given to bookkeeping records, procedures and principles.⁸

Ethel Brock summarized her investigation of this subject in these words:

Since 1930 business educators have quite generally recognized the fact that bookkeeping can no longer be justified on vocational grounds alone.

Since 1935 increased emphasis has been placed on the objective that bookkeeping should increase one's knowledge of business relations, investment, and finance.

The consumer objective has been receiving attention since 1936. Educators are recognizing the fact that bookkeeping objectives must of necessity change with economic conditions and governmental requirements.⁹

The number of bookkeeping students who eventually become bookkeepers has always been low (Altholz reports from 10 to 15 per cent).¹⁰ During the depression years (1930 to 1940) the per cent of such employment was even less than in normal times. This fact certainly gave some impetus to the popularity of the personal-use objective.

⁸Harry I. Good, "Bookkeeping for Personal Use," Business Education for Tomorrow, p. 213. Fourteenth Yearbook of the Eastern Commercial Teachers Association, John G. Kirk, President. Philadelphia: Eastern Commercial Teachers Association, 1941.

⁹Ethel Brock, A History of High School Bookkeeping Objectives, Monograph No. 47, p. 19. Cincinnati: South-Western Publishing Company, 1939.

¹⁰Nathaniel Altholz, "A Challenge to Teachers of Bookkeeping." The Business Education World, XIV - 3 (November, 1934), 188.

The effect of this social objective in the bookkeeping course is indicated by the titles of recently published textbooks for use in bookkeeping classes in secondary schools.¹¹ These titles describe the content and give some suggestion as to the bias in the development of the materials.

Even in the books which have retained quite definitely the vocational objective, there has been introduced an increased number of non-vocational units. Thus, the last edition of the widely used 20th Century Bookkeeping¹² has included the following topics: personal bookkeeping and budgeting, social security records for the individual, bookkeeping and budgeting for social organizations, and cash records for clubs.

The fact that increased emphasis has been placed upon the social objectives of bookkeeping does not mean that the vocational objective has been discarded. Good makes this clear in the following statement:

Many different goals or purposes have guided curriculum-making and instructional procedures in the field of bookkeeping. The first major objective was vocational proficiency--the development of skills needed to perform certain

¹¹G. H. Dalrymple and P. M. Heiges, General Record Keeping for Personal and Business Use, the Gregg Publishing Company, 1939.

Fayette H. Elwell, Ernest A. Zelliot, and H. I. Good, Personal and Business Record Keeping. Boston: Ginn & Company, 1938.

John George Kirk, G. M. Alleman, and Isadore Klein, Bookkeeping for Personal and Business Use. Philadelphia: John C. Winston Company, 1939.

¹²Paul A. Carlson, Alva Leroy Prickett, and Hamden L. Forkner, 20th Century Bookkeeping and Accounting, 18th edition; Cincinnati: South-Western Publishing Company, 1940.

bookkeeping tasks. The need for records in the business world, therefore, is not decreasing but, on the contrary, is continually growing in volume and importance, and the vocational aim in bookkeeping is as sound now as it ever was for a certain percentage of our students.¹³

The Issue of Recordative Bookkeeping.--Advocates of the recordative objective in bookkeeping believe that emphasis should be given to the clerical task of recording business data. There is no necessity for knowing much about the why or the wherefore, nor is there any need to prepare interpretative statements and reports covering the results of a period of operations. This philosophy is described in the following statement:

The desirability of establishing a new type of bookkeeping for a new type of student has been recognized for some time. Several attempts are being made toward the simplification of bookkeeping principles and practices so as to reach a larger number of students and to make their work of greater vocational significance.

. as the great majority of very small business or personal records are kept on a simple basis, it seems undesirable to insist that all students begin their study with work which stresses the accountant's and the managerial points of view.¹⁴

These editors then point out that recordative bookkeeping may be more interesting and practical since it includes record-keeping for home clubs. It is easy to master, and the per cent of failures may be smaller since the type of work is better

¹³Harry I. Good, "Bookkeeping for Personal Use," op. cit., p. 213.

¹⁴Trends and Factors Affecting Curriculum Revision in Business Education, pp. 53-55. Fourteenth Yearbook of the Eastern Commercial Teachers Association, John G. Kirk, President. Philadelphia: Eastern Commercial Teachers Association, 1941.

suited to the capacities and interests of the pupil.¹⁵

Scoca dissents from this view and holds that a genuine understanding of the reason back of the entry is necessary. He advocates--

. genuine emphasis on the science underlying the records and not on the mere mechanics of bookkeeping. The mechanical debit and credit drillmaster of yore has gone with the wind. Bookkeeping was never intended to transform youngsters into bookkeeping machines. I may be stretching the point, but a bookkeeping teacher should never accept an entry without an analysis of and reason for every debit and credit. In other words, if we are going to distinguish between vocational bookkeeping and record-keeping, we must teach our bookkeeping students not only what entry to make but why it is made, and we should grade our students on this analytical ability.¹⁶

These represent some of the current issues concerning the philosophy and objectives of bookkeeping in the secondary schools. There seemingly is no recent contribution to a discussion of the subject of this study, viz., the content of the course of study in bookkeeping, except as the issues discussed above relate to that problem. Gilbert practices the use of actual books, forms, social security records, and budgets of business firms in his bookkeeping classes.¹⁷ He believes in teaching bookkeeping as it is done in business.

¹⁵Ibid., p. 55.

¹⁶Canio M. Scoca, "The Accounting Field and the Youth Problem," The Contribution of Business Education to Youth Adjustment, p. 77. Thirteenth Yearbook of the Eastern Commercial Teachers Association, Peter L. Agnew, President. New York: Eastern Commercial Teachers Association, 1940.

¹⁷Marc D. Gilbert, "Enriching the Teaching of Bookkeeping," The Journal of Business Education, Vol. XVI, No. 6 (February, 1941), p. 25.

Trautmann, on the other hand, says that in teaching the theory of bookkeeping, it is not necessary to teach bookkeeping "as it is done." He proposes the use of very simple forms designed only to bring about a mastery of principles without regard to form.¹⁸

Summary of Trends and Issues.--Bookkeeping is the oldest business subject taught in the secondary schools. It possesses merit as a school subject. Its content is rather definitely fixed by tradition. Research directed toward determining what should be taught in bookkeeping has been directed chiefly toward an analysis of the duties of bookkeepers.

The last decade has seen the rise of social objectives as opposed to the traditional vocational objective. Bookkeeping for personal use, recordative bookkeeping, and consumer values have been emphasized. The vocational objective remains, however, as the major justification for the teaching of the subject in the secondary school, and an analysis of occupational aspects is a proper approach to the study of content in the course of study.

¹⁸Harrison Trautmann, "We Cut the Learning Time of Bookkeeping in Half," The Business Education World, XXII-4 (December, 1941), 310-312.

CHAPTER III

THE PREPARATION OF THE CHECK LIST

Tabulation of Topics, Units, and Skills

Discovering the Topical Content.--A thorough and complete evaluation of the courses of study used in the Indianapolis high school courses in bookkeeping required more than the submission of a mere outline or syllabus of the course.

In the development of this thesis, it should be observed that a very common topic in a bookkeeping course of study is that of adjusting entries. If a critic were asked to evaluate the topic, adjusting entries, he would be unable to do so without further information, for there are actually seven separate and distinct classes of adjusting entries. The mere presence of this topic in a syllabus does not reveal whether there are seven, five, or three classes of adjustments taught. It was necessary, therefore, to break down the topic into its component parts both in the constructing of the check list and in securing the evaluation.

It is known that the bookkeeping classes in some Indianapolis high schools use the adding or listing machine in the classroom work and instruct the pupils in the proper operation of this machine. Others do not. It is quite probable that an outline or syllabus prepared by these schools would not reveal whether the machine is so used, or not.

The syllabus might contain the item, taking a trial balance. It would not reveal, however, whether the student was

given instruction in the skill of pencil-footing in the taking of the balance of the ledger account.

The syllabus is likely to contain a listing of units of instruction, but there is no certainty that the units will be completely broken down into skills and minor facts. There are certain related materials, such as arithmetic useful in bookkeeping, which are often taught by the bookkeeping teacher, but which are not likely to appear in a syllabus.

It was decided, therefore, not to ask for a syllabus from each of the Indianapolis High Schools. Instead, the head of the commercial department of each of the seven Indianapolis High Schools was asked to submit a list of the Topics, Units, and Skills taught in the bookkeeping classes.¹

After such lists were received from each department head, a composite list of the topics was constructed. It was feared, however, that persons preparing the original lists might have, through inadvertence, omitted one or more topics. Consequently, a copy of the composite listing was returned to each department head with the request that he check again the items which were included in his bookkeeping course of study and that he add at the bottom of the sheet any omitted items.

The desirability of this step was confirmed by the fact that nearly every department head checked items which were not included in his original listing. A complete listing of the topics by high schools is provided in TABLE I.

¹See Appendix I for list of high schools and department heads.

TABLE I

TOPICS INCLUDED IN INDIANAPOLIS HIGH SCHOOL COURSES IN BOOKKEEPING
BY HIGH SCHOOLS

Topics	High Schools						
	SBS	MTES	ATS	BRES	WES	CAES	TCES
1. Preparation of balance sheets	X	X	X	X	X	X	X
2. Preparation of statements of profit and loss	X	X	X	X	X	X	X
3. Theory of double-entry bookkeeping	X	X	X	X	X	X	X
4. Preparation of a working sheet and classification of accounts	X	X	X	X	X	X	X
5. How to close a ledger	X	X	X	X	X	X	X
6. Use of purchases or invoice journals	X	X	X	X	X	X	X
7. Use of sales journals	X	X	X	X	X	X	X
8. Use of cash receipts journals	X	X	X	X	X	X	X
9. Use of cash payments journals	X	X	X	X		X	X
10. Making entries for cash discounts	X	X	X	X	X	X	X
11. Sending monthly statements of account to customers		X	X	X	X		X
12. Handling and proving of cash	X	X	X	X	X	X	X
13. Accounting for partnerships	X	X	X	X		X	X
14. Preparation of profit and loss statement with percentage analysis		X	X			X	
15. Pen and ink posting	X	X	X	X	X	X	X
16. Taking trial balances; pencil-footing accounts	X	X	X	X	X	X	X
17. Ruling ledger accounts (pen and ink)	X	X	X	X	X	X	X
18. Reconciling bank accounts	X	X	X	X	X	X	X
19. Figuring and checking extensions on invoices	X	X	X	X	X		X
20. Writing checks and maintaining record of bank balances	X	X	X	X	X	X	X
21. Checking postings	X	X	X	X	X	X	X
22. Ruling columns in books of original entry (pen and ink)	X	X	X	X	X	X	X
23. Making deposit slips	X	X	X	X	X		X
24. Figuring inventories	X	X	X	X	X		
25. How to make change		X			X		
26. How to make adjustments for:							
a. Merchandise Inventories	X	X	X	X	X	X	X
b. Deferred charges and expense inventories	X	X	X	X	X	X	X
c. Deferred credits to income	X	X	X	X	X	X	X
d. Accrued expenses	X	X	X	X	X	X	X
e. Accrued income	X	X	X	X	X	X	X
f. Estimated loss from bad debts	X	X	X	X	X	X	X
g. Depreciation of fixed assets	X	X	X	X	X	X	X
27. Entries for promissory notes, with and without interest	X	X	X	X	X	X	X
a. Entries for drafts and trade acceptances	X	X	X	X	X	X	X

TABLE I, CONTINUED

Topics	High Schools						
	SES	MTES	ATS	BRHS	WHS	CABS	TCHS
28. Petty cash funds kept by the imprest system	X	X	X	X	X	X	X
a. Handling advances to salesmen and salesmen's traveling expenses		X					
29. Contingent liabilities in the balance sheet		X		X		X	
30. Entries for notes receivable discounted		X	X	X	X	X	X
31. Subsidiary ledgers and controlling accounts	X	X	X		X	X	X
32. Making the balance sheet in double account form showing working capital		X	X		X	X	
33. Entries for transactions involving extraneous profits and losses		X					
34. Entries for costs or income applicable to a previous period		X	X				
35. Closing the ledger through a selling or trading account with net trading profit carried to profit and loss account	X	X	X		X		X
36. Use of the cash-journal or cash-journal ledger (commonly called a synoptic journal)		X	X	X		X	
37. Construction of a departmentalized statement of profit and loss	X	X	X				
38. Accounting for corporations	X	X	X			X	
a. Dividends--how declared and entries for	X	X	X			X	
39. Goodwill and other intangible assets, such as patents	X	X	X			X	
40. Liquidation of a business enterprise and the disposition of profits and losses in liquidation of partnerships		X					
41. Purchase of a going concern by another firm		X	X		X		
42. Accounting for special partnerships and joint ventures						X	
43. Accounting for manufacturing concerns	X	X	X			X	
a. Statements and reports for manufacturing concerns	X	X	X			X	
b. Cost accounting			X				
c. The use of the manufacturing account and the closing of the ledger through manufacturing, selling, and profit and loss accounts		X	X				
44. The voucher system of accounting for cash disbursements	X	X	X			X	X
45. Payroll problems and deductions for social security and other purposes		X	X			X	X
46. Sinking funds		X					

TABLE I, CONTINUED

Topics	High Schools						
	SHS	MTHS	ATS	BRES	WHS	CAHS	TCHS
47. Reserves for contingencies		X					
48. Comparative balance sheets	X	X	X				
49. Simple machine posting		X			X		
50. Preparation of statements and reports with accompanying supporting schedules	X	X	X	X	X	X	X
51. Making contra entries in red ink		X				X	
52. Operation of an adding machine or listing machine		X	X		X	X	
53. Keeping memorandum books, such as petty cash records, promissory note registers, etc.	X	X	X	X		X	X
54. Making of Federal Income Tax reports	X	X	X	X			
55. How to prepare payrolls	X	X	X				
56. Figuring of percentages		X	X		X		
57. Figuring of trade discounts	X	X	X	X	X		
58. Figuring mark-up as a percentage of sales price	X	X	X			X	
59. Figuring commissions and brokerage		X	X				
60. Figuring costs of express, freight, and parcel post shipments		X	X		X	X	
61. Computing averages		X					
62. Preparing graphs		X	X				
63. Computing depreciation	X	X	X	X	X	X	X
64. Figuring simple interest	X	X	X	X	X	X	X
65. Figuring compound interest		X	X	X			
66. Bank discount	X	X	X	X			X
67. Theory of property insurance	X	X	X	X			
68. Life insurance		X				X	
*69. Operation of a continuous form-feed billing machine							
70. Operation of a key-driven calculator		X				X	
*71. Operation of an automatic, or wheel-driven calculator							
*72. Operation of one or more bookkeeping machines							
73. How to figure turnover		X					
74. Use of short methods in multiplication (aliquot parts, etc.)		X					
*75. Averaging accounts							

*Items starred were not checked by any high school as included in their course of study, but were included in the check list to make certain that they would be evaluated by the respondents.

The Construction of the Questionnaire.--In submitting these topics to a group of competent critics for appraisal, it was desired that the respondents should know and understand fully the following facts:

1. That the persons selected to receive check lists were not selected at random, but were chosen because of professional standing and expert knowledge.
2. That consideration should be given only to the vocational and pre-professional aspects of the subject. No mention was made of social, personal-use, consumer, or recordative objectives.
3. In addition to evaluating the topics listed, the respondents were to suggest topics, units, or skills not listed, but which were believed by them to be essential and desirable in a high school course in bookkeeping.
4. That comment and advice on the teaching of this subject would be of the utmost value in future revisions of the course of study.

The essential information desired from the respondents centered in the two questions, "should this topic be taught in high school?" or "should this topic not be taught in high school?" It was believed, however, that the respondent would be aided in his own thinking if the questions could be expanded to include an analysis of the reasons for excluding topics not considered as essential and properly included.

The first classification (1) (See questionnaire in Appendix II) was expected to provide the list of significant items. The second classification (2) was to be used if the items were considered essential but better learned on the job. This second classification was believed to make possible a higher refinement of the evaluative process by discriminating between

items which are essential and must be learned in school and those which can be better learned after the pupil leaves school.

The third classification (3) permitted the respondent to disqualify an item as essential, but still to recommend it as desirable subject matter in the bookkeeping course if it can be taught. It is probable that certain topics can profitably be taught because they give exercise in the application of generalizations previously learned. Yet, these topics in themselves may not be considered essential.

The fourth classification (4) is completely negative. The interpretation of "no value" means that the principle or skill has no value to a high school student of bookkeeping.

Shortening the Questionnaire.--It was obvious that the questionnaire contained items which everyone would agree should be included in a high school course in bookkeeping. Because of this assumption, and because the check list was rather long, it was decided to separate from the checked portion of the list those items which are fundamental in the teaching of the subject.

The nature of the inquiry was such, however, that these items could not be removed entirely from the list, else the respondent would be forced to add them. It was decided, as a solution to the problem, to list them in the explanatory section of the questionnaire, but with a request that any dissenting opinion as to their essential classification be noted.

As a result of this modification, the original list of seventy-five items to be evaluated was reduced to fifty.

Evaluation of Items Considered Worthy of Emphasis.--It was considered desirable in the light of the possible use to be made of the results of the study if the respondents could indicate which of the topics should, in their opinion, receive more than ordinary emphasis.

This bias in favor of certain items was to be indicated by encircling the number of the item. In addition, the respondent was asked to write in a general statement any emphasis which he believed should be placed in the teaching of the subject.

Justification of the Use of the Questionnaire.--In a discussion of the use of the questionnaire in educational research, the author writing in Monroe's Cyclopedia of Educational Research points out that this method has been criticized when used to collect data dealing with opinions rather than with facts. For such use, the questionnaire should not go beyond a plain numerical answer or an answer of yes or no. Continuing, this author said:

There is still some place, however, for the questionnaire method, provided the questions are few in number, can be answered numerically or by "yes" or "no", cannot lead to any misunderstanding, and can be answered without bias, and leave no loophole for a partial answer.²

Plan of Circulation.--Following the preparation of the questionnaire, a limited number (fifteen) were prepared for trial circulation. After ten days, during which time ten

²The Questionnaire," A Cyclopedia of Educational Research, ed. Paul Monroe, Vol. V, p. 99. New York: The Macmillan Company, 1913.

of these trial questionnaires were returned properly filled out, the final draft of the questionnaire (Appendix II) was drawn up and mailed.

The questionnaires were mailed with a stamped, self-addressed envelope enclosed for convenience in replying.

CHAPTER IV

THE SELECTION OF INDIVIDUALS TO BE CIRCULARIZED

Qualifications Desired

Knowledge of Subject Matter of Bookkeeping.--The first requisite in the qualifications of the individual selected for interviewing is that he be well informed and educated in the knowledge of the subject. This knowledge must include not only the principles of bookkeeping and accounting but also the psychology of the subject and the learning difficulties.

It is desirable that this acquaintance with the subject and its nature include a knowledge of current developments in the entire field. The trend toward mechanized bookkeeping, the elimination of steps in the handling of office routines, and the effect of governmental agencies in prescribing accounting practices--all suggest the need for advice from individuals who are thoroughly informed about the current trends and practices.

Knowledge of the Product of the Schools.--Again, the individual who can make the best contribution toward an evaluation of the topics of the course of study is one who is in a position to judge the training equipment of the graduates of the bookkeeping classes. He should be able to discriminate between occupational requirements which are of immediate importance and those which are likely to be of more remote value to the

office employee.

Inasmuch as a very limited, but definitely certain, proportion of the bookkeeping graduates of a high school attend college and enter accounting classes in colleges and universities, it is obviously desirable that the needs of these students be taken into consideration.

Need for Professional Cooperation.--Equally important, of course, is the inclination on the part of the individual to accept the problem as his own and to make the necessary contribution.

This attitude is most likely to be found among groups which have attained a professional or semi-professional status comparable to that of the teaching profession. There must, in other words, be an interest in the problem which grows out of the wider, social need. In addition, a scientific attitude is required which causes the individual to recognize the existence of a problem and to wish to make a contribution toward its solution.

The Selection of the Groups

Public Accountants.--Fortunately, there are at least two highly professional groups available in the Indianapolis community which meet all of the requirements stated above. The first of these is the group of practicing public accountants.

These individuals, through their auditing practices and through consultative and other services rendered to their clients come into close contact with bookkeeping employees and their work.

This contact enables them to appraise the occupational equipment of these workers and to estimate deficiencies and shortages in their training.

Not only that, but they are fully informed as to the technical needs in the bookkeeping and accounting field. Their work includes both the auditing of accounts and the installation of accounting systems. In both of these areas they are vitally concerned with problems of personnel.

A second group, which is much smaller in number in the Indianapolis community, is the National Office Management Association.¹ This association, both in its local and national activities, has shown a lively interest in the office training work of the public high schools. "The Association is attempting to establish a closer relationship between school and office. A widely used testing program contributes to the realization of this objective."²

There are many office managers and employers who are not members of the National Office Managers Association, but who are motivated by the same genuine and professional interest in the business training program of the public high schools.

The public accountants and the group of office managers and employers of office personnel seemed to be especially well qualified to participate in the evaluative work.

¹Organized, January, 1941, Mr. F. P. McCune, American States Insurance Company, Indianapolis, Indiana, President.

²National Office Management Association (pamphlet) Philadelphia: February, 1942. p. 2.

College Professors of Accounting.--It would be expected that professors of accounting in the colleges and universities would be interested and sympathetic toward this study. They are, by profession, interested in the furtherance of research and scholarship. Many of them were teachers of business subjects in the secondary schools before they became professors of accounting in the college or university. A number engage in accounting and auditing practice in addition to their teaching duties. Some of them are assisting in the training of teachers for the secondary schools. Some are authors of bookkeeping and accounting textbooks. All of them give instruction in accounting to graduates of secondary schools, some of whom have studied bookkeeping before entering college.

Paul A. Carlson, Professor of Accounting in Whitewater State Teachers College (Wisconsin), himself a former high school teacher and an author of a high school textbook in bookkeeping,³ has discovered that ". . . college professors of accounting tend to keep in touch with changing business practices more than do most high school teachers."⁴

Because they are constantly teaching the more difficult phases of accounting, they are probably cognizant of the degree

³Paul A. Carlson, Alva Leroy Prickett, and Handen L. Forkner, 20th Century Bookkeeping and Accounting, op. cit.

⁴Paul A. Carlson, "Research Shows How to Keep the Bookkeeping Course Practical." The National Business Education Quarterly, Vol. IX, No. 4, (May, 1941) p. 22.

of difficulty in teaching many of the principles of accounting and their opinions as to grade placement would, therefore, be invaluable.

Finally, the accounting class in college is one of the goals toward which the high school student of bookkeeping might be directing his steps. It is just as logical to invite the college professor of accounting to evaluate the items of the course of study of the preparatory work in bookkeeping as it is to invite the public accountant or the office manager.

Results of the Circularization

Accountants.--A questionnaire was directed to each public accountant listed in the classified advertising section of the Indianapolis Telephone Directory. Where the listing was that of a firm, the questionnaire was addressed to the manager. In addition, a limited number of questionnaires was sent to public accountants in Chicago and New York. The total number directed to public accountants was thirty-five. Of this number, sixteen returned questionnaires and one replied by letter without completing the questionnaire.

Office Managers.--Thirty questionnaires were mailed to office and personnel managers, fifteen of whom were taken from the roster of the membership list of the Indianapolis Chapter of the National Office Management Association. The remaining fifteen were selected from a list of well-known office and personnel managers in Indianapolis. Of this number, eleven returned questionnaires and three replied by letter without completing the questionnaire.

College Professors of Accounting.--Questionnaires were sent to fifty-five professors of accounting in as many colleges and universities throughout the United States. With the exception of five questionnaires included in this group which were mailed as a trial circulation to individuals selected at random from a list of acquaintances of the investigator, the names were selected at random from a mailing list of a publishing company.

Of the fifty-five questionnaires sent to this group, twenty-five were returned and tabulated. Appendix III contains a complete list of the fifty-two individuals who returned questionnaires.

Tabulation of Responses

Distribution of Classifications.--The first step in the analysis of the returns was to tabulate the replies. The result of this tabulation is shown in TABLE II. This Table shows the number who evaluated each item under each of the four classifications. The item numbers correspond to the topics listed in TABLE I, the name of the topic being omitted to save space.

The various items in TABLE II should be read as follows: for item 28a, there were ten college professors who gave this item an evaluation of 1, six who gave it an evaluation of 2, eight who gave it an evaluation of 3, and one who gave it an evaluation of 4. Of the accountants and office managers, fourteen gave item 28a an evaluation of 1, nine gave it an evaluation of 2, four gave it an evaluation of 3, and none evaluated it as 4. The final column of the Table shows the totals for both groups.

TABLE II

RESPONSES TO CHECK LIST
 SHOWING DISTRIBUTION OF CLASSIFICATIONS MADE BY TWENTY-FIVE COLLEGE
 PROFESSORS OF ACCOUNTING AND TWENTY-SEVEN ACCOUNTANTS AND OFFICE MANAGERS

Item No.	Frequencies for Each Evaluative Classification											
	College Professors				Accountants, Etc.				Combined Groups			
	1	2	3	4	1	2	3	4	1	2	3	4
26a	24	0	1	0	19	5	3	0	43	5	4	0
26b	25	0	0	0	17	5	5	0	42	5	5	0
26c	24	0	1	0	17	5	5	0	41	5	6	0
26d	25	0	0	0	20	4	3	0	45	4	3	0
26e	25	0	0	0	19	5	3	0	44	5	3	0
26f	25	0	0	0	16	7	2	2	41	7	2	2
26g	24	0	0	0	20	2	3	0	44	2	3	0
27	20	3	2	0	19	1	7	0	39	4	9	0
27a	15	4	6	0	18	0	9	0	33	4	15	0
28	17	3	5	0	19	3	2	0	36	6	7	0
28a	10	6	8	1	14	9	4	0	25	15	12	1
29	13	3	9	0	14	4	6	3	27	7	16	3
30	16	3	6	0	20	2	4	1	36	5	10	1
31	21	1	1	0	25	1	1	0	46	2	2	0
32	8	4	6	7	14	2	5	5	22	6	11	12
33	6	5	9	4	12	7	4	3	18	12	13	7
34	14	3	6	0	17	6	3	1	31	9	9	1
35	8	3	8	5	13	3	5	6	21	6	13	11
36	11	5	6	3	17	1	6	2	28	6	12	5
37	7	5	11	2	12	6	8	1	19	11	19	3
38	20	1	3	1	19	3	2	1	39	4	5	2
38a	18	3	3	1	21	3	3	1	39	6	6	2
39	12	1	8	4	14	5	5	3	26	6	13	7
40	7	2	8	8	13	5	8	2	20	7	16	10
41	11	3	6	5	12	6	6	3	23	9	12	8
42	1	3	8	13	10	7	3	7	11	10	11	20
43	8	3	11	4	17	6	2	1	25	9	13	5
43a	7	4	9	5	17	6	3	1	24	10	12	6
43b	3	5	7	9	13	6	7	1	16	11	14	10
43c	4	4	10	6	13	7	4	3	17	11	14	9
44	15	3	5	2	22	2	2	1	37	5	7	3
45	17	2	5	1	23	4	0	0	40	6	5	1
46	7	4	6	8	9	2	10	6	16	6	16	14
47	8	4	6	7	11	3	9	4	19	7	15	11
48	14	3	5	3	20	2	4	1	34	5	9	4
49	9	8	8	0	12	6	9	0	21	14	17	0
50	20	2	2	1	24	2	1	0	44	4	3	1

TABLE II, CONTINUED

Item No.	Frequencies for Each Evaluative Classification											
	College Professors				Accountants, Etc.				Combined Groups			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
51	9	4	4	8	9	7	1	9	18	11	5	17
52	13	4	8	0	19	3	4	1	32	7	12	1
53	17	3	3	2	17	8	2	0	34	11	5	2
54	10	7	2	6	11	5	5	6	21	12	7	12
55	11	6	6	2	20	3	3	1	31	9	9	3
56	23	1	1	0	25	0	1	1	48	1	2	1
57	19	4	1	1	21	2	4	0	40	6	5	1
58	19	2	3	1	18	3	4	1	37	5	7	2
59	13	5	4	3	11	4	8	4	24	9	12	7
60	12	6	3	4	16	6	3	2	28	12	6	6
61	17	2	3	3	17	2	7	0	34	4	10	3
62	8	5	5	7	7	4	10	7	15	9	15	14
63	20	2	2	1	20	2	5	0	40	4	7	1
64	22	1	2	0	23	0	4	0	45	1	6	0
65	13	3	7	2	19	1	5	2	32	4	12	4
66	21	1	3	0	15	1	9	2	36	2	12	2
67	5	4	7	8	15	2	9	3	20	6	16	11
68	3	3	8	11	8	2	12	5	11	5	20	16
69	2	10	7	6	6	5	7	9	8	15	14	15
70	5	10	7	3	9	7	7	4	14	17	14	7
71	3	12	7	3	10	7	7	3	13	19	14	6
72	7	9	8	1	8	9	5	5	15	18	13	6
73	14	1	7	3	13	3	9	2	27	4	16	5
74	12	1	9	3	15	2	8	2	27	3	17	5
75	7	2	10	6	10	5	7	4	17	7	17	10

Irregularities in Tabulation.--A study of TABLE II reveals a few instances in which the totals for a given item do not equal the total responses. This apparent discrepancy is explained by the fact that in some instances respondents did not place any evaluation on one or more items. In some of these cases the respondent placed an interrogation point in place of the evaluation, while in others the space was left blank.

CHAPTER V

ANALYSIS AND INTERPRETATION OF RESULTS

Each Item Given An Index of Significance

Conversion of Frequencies to Decile Ranking.--Before attempting to interpret the distribution of evaluations, as recorded in TABLE II, it was necessary to convert the ratings into percentages of the total number replying.

Inasmuch as the use of percentages would represent an unnecessary refinement in the treatment of the data, the per cents have been translated into deciles. TABLE III shows the decile ranking of each item as evaluated by the respondents.

Again using item 28a as an example, for every ten college professors responding, (see TABLE III) four evaluated the item as 1, two evaluated the item as 2, three evaluated the item as 3, and none evaluated it as 4. For every ten accountants and office managers, five evaluated item 28a at 1; three, as 2; one, as 3; and none, as 4. For every ten responses from the combined groups, five evaluated the item as 1; three, as 2; two as 3; and none, as 4.

Having interpreted the evaluation in terms of a common base, these deciles now serve as indexes of significance for each item. The first, and most important, consideration is naturally directed to the significance of items in terms of the number of

TABLE III

DECILE RANKING OF BOOKKEEPING COURSE OF STUDY ITEMS AS CLASSIFIED
BY TWENTY-FIVE COLLEGE PROFESSORS OF ACCOUNTING AND TWENTY-
SEVEN ACCOUNTANTS AND OFFICE MANAGERS

Item No.	Decile Rank of Each Item											
	College Professors				Accountants, Etc.				Combined Groups			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
26a	10	0	0	0	7	2	1	0	8	1	1	0
26b	10	0	0	0	6	2	2	0	8	1	1	0
26c	10	0	0	0	6	2	2	0	8	1	1	0
26d	10	0	0	0	7	1	1	0	9	1	1	0
26e	10	0	0	0	7	2	1	0	8	1	1	0
26f	10	0	0	0	6	3	1	1	8	1	0	0
26g	10	0	0	0	7	1	1	0	8	0	1	0
27	8	1	1	0	7	0	3	0	8	1	2	0
27a	6	2	2	0	7	0	3	0	6	1	3	0
28	7	1	2	0	7	1	1	0	7	1	1	0
28a	4	2	3	0	5	3	1	0	5	3	2	0
29	5	1	4	0	5	1	2	1	5	1	3	1
30	6	1	2	0	7	1	1	0	7	1	2	0
31	8	0	0	0	9	0	0	0	9	0	0	0
32	3	2	2	3	5	1	2	2	4	1	2	2
33	2	2	4	2	4	3	1	1	3	2	3	1
34	6	1	2	0	6	2	1	0	6	2	2	0
35	3	1	3	2	5	1	2	2	4	1	3	2
36	4	2	2	1	6	0	2	1	5	1	2	1
37	3	2	4	1	4	2	3	0	4	2	4	1
38	8	0	1	0	7	1	1	0	8	1	1	0
38a	7	1	1	0	8	1	1	0	8	1	1	0
39	5	0	3	2	5	2	2	1	5	1	3	1
40	3	1	3	3	5	2	3	1	4	1	3	2
41	4	1	2	2	4	2	2	1	4	2	2	2
42	0	1	3	5	4	3	1	3	2	2	2	4
43	3	1	4	2	6	2	1	0	5	2	3	1
43a	3	2	4	2	6	2	1	0	5	2	2	1
43b	1	2	3	4	5	2	3	0	3	2	3	2
43c	2	2	4	2	5	3	1	1	3	2	3	2
44	6	1	2	1	8	1	1	0	7	1	1	1
45	7	1	2	0	9	1	0	0	8	1	1	0
46	3	2	2	3	3	1	4	2	3	1	3	3
47	3	2	2	3	4	1	3	1	4	1	3	2
48	6	1	2	1	7	1	1	0	7	1	2	1
49	4	3	3	0	4	2	3	0	4	3	3	0
50	8	1	1	0	9	1	0	0	8	1	1	0
51	4	2	2	3	3	3	0	3	3	2	1	3
52	5	2	3	0	7	1	1	0	6	1	2	0

TABLE III, CONTINUED

Item No.	Decile Rank of Each Item											
	College Professors				Accountants, Etc.				Combined Groups			
	1	2	3	4	1	2	3	4	1	2	3	4
53	7	1	1	1	6	3	1	0	7	2	1	0
54	4	3	1	2	4	2	2	2	4	2	1	2
55	4	2	2	1	7	1	1	0	6	2	2	1
56	9	0	0	0	9	0	0	0	9	0	0	0
57	8	2	0	0	8	1	1	0	8	1	1	0
58	8	1	1	0	7	1	1	0	7	1	1	0
59	8	1	1	0	4	1	3	1	5	2	2	1
60	5	2	2	1	6	2	1	1	5	2	1	1
61	5	2	1	2	6	1	3	0	7	1	2	1
62	7	1	1	1	3	1	4	3	3	2	3	3
63	3	2	2	3	3	1	2	0	8	1	1	0
64	8	1	1	0	9	0	1	0	9	0	1	0
65	9	0	1	0	7	0	2	1	6	1	2	1
66	5	1	3	1	6	0	3	1	7	0	2	1
67	8	0	1	0	6	1	3	1	4	1	3	2
68	2	2	3	3	6	1	3	1	4	1	4	3
69	1	1	3	4	3	1	4	2	2	1	3	3
70	1	4	3	2	2	2	3	3	2	3	3	3
71	1	4	3	1	3	3	3	1	3	3	3	1
72	2	4	3	1	4	3	3	1	3	4	3	1
73	1	5	3	1	4	3	3	1	3	3	3	1
74	3	4	3	0	3	3	2	2	3	3	3	1
75	3	4	3	1	5	1	3	1	5	1	3	1
76	6	0	3	1	5	1	3	1	5	1	3	1
77	5	0	4	1	6	1	3	1	5	1	3	1
78	5	0	4	1	6	1	3	1	5	1	3	1
79	3	1	4	2	4	2	3	1	3	1	3	2

deciles in column 1. A rating of "1" represents the positive opinion that the item should be taught in the high school course in bookkeeping.

Arranging Items in Order of Significance. In TABLE IV, the items have been arranged in the order of their significance as measured by the decile ranking of each item. The following explanation is made to describe the method of constructing TABLE IV:

The respondents were asked to evaluate each item as "1" if they considered this item as essential and believed that it should be taught in a high school course in bookkeeping. Therefore, the number of deciles appearing in column 1 for each group, and for the combined groups of respondents, is the best measure of the significance of the items. Using the deciles given in TABLE III for the combined groups, it is found that four items, viz., 26d, 31, 56, and 64, have a decile rank of 9 for evaluation "1".

These items are found in TABLE IV with an index of significance of "9".

Items of Greatest Significance.--The decision as to what decile rank constitutes an acceptable degree of significance was made on a purely arbitrary basis. Inasmuch as a decile rank of five or above is a majority opinion of all respondents it was decided that items receiving this ranking might properly be declared highly significant in the opinion of the respondents. All items in TABLE IV with a decile rank of five or above have been listed in TABLE V in the order of their significance.

TABLE IV

COURSE OF STUDY ITEMS IN BOOKKEEPING ARRANGED IN ORDER OF SIGNIFICANCE
AS EVALUATED BY COLLEGE PROFESSORS OF ACCOUNTING AND
ACCOUNTANTS AND OFFICE MANAGERS

<u>Index of Significance</u>	<u>Items Receiving Each Classification</u>
10	Items 1 to 25 inclusive were accepted by all respondents without dissent, and therefore are accorded an <u>index of significance</u> of 10.
9	26d, 31, 56, 64,
8	26a, 26b, 26c, 26e, 26f, 26g, 27, 38, 38a, 45, 50, 57, 63.
7	28, 30, 44, 48, 53, 58, 61, 66.
6	27a, 34, 52, 55, 65.
5	28a, 29, 36, 39, 43, 43a, 59, 60, 73, 74
4	32, 35, 37, 40, 41, 47, 49, 54, 67.
3	33, 43b, 43c, 46, 51, 62, 70, 71, 72, 75.
2	42, 68, 69.
Less than 2	None

TABLE V

COURSE OF STUDY ITEMS OF HIGH SIGNIFICANCE ARRANGED IN ORDER OF RANK
AS EVALUATED BY COLLEGE PROFESSORS OF ACCOUNTING AND
ACCOUNTANTS AND OFFICE MANAGERS

<u>Index of Significance</u>	<u>Topic or Unit of Instruction</u>
10	1. Preparation of balance sheets 2. Preparation of statements of profit and loss 3. Theory of double-entry bookkeeping 4. Preparation of a working sheet and classification of accounts 5. How to close a ledger 6. Use of purchases or invoice journals 7. Use of sales journals 8. Use of cash receipts journals 9. Use of cash payments journals 10. Making entries for cash discounts 11. Sending monthly statements of account to customers 12. Handling and proving of cash 13. Accounting for partnerships 14. Preparation of profit and loss statement with percentage analysis 15. Pen and ink posting 16. Taking trial balances; pencil-footing accounts 17. Ruling ledger accounts (pen and ink) 18. Reconciling bank accounts 19. Figuring and checking extensions on invoices 20. Writing checks and maintaining record of bank balances 21. Checking postings 22. Ruling columns in books of original entry (pen and ink) 23. Making deposit slips 24. Figuring inventories 25. How to make change
9	26d. How to make periodic adjustments for accrued expenses 31. Subsidiary ledgers and controlling accounts 56. Figuring of percentages 64. Figuring simple interest
8	26a. How to make periodic adjustments for merchandise inventories 26b. How to make periodic adjustments for deferred charges and expense inventories

TABLE V, CONTINUED

Index of Significance	Topic or Unit of Instruction
	26c. How to make periodic adjustments for deferred credits to income 26e. How to make periodic adjustments for accrued income 26f. How to make periodic adjustments for estimated loss from bad debts 26g. How to make periodic adjustments for depreciation of fixed assets 27. Entries for promissory notes, with and without interest 38. Accounting for corporations 38a. Dividends--how declared and entries for 45. Payroll problems and deductions for social security and other purposes 50. Preparation of statements and reports with accompanying supporting schedules 57. Figuring of trade discounts 63. Computing depreciation
7	28. Petty cash funds kept by the imprest system 30. Entries for notes receivable discounted 44. The voucher system of accounting for cash disbursements 48. Comparative balance sheets 53. Keeping memorandum books, such as petty cash records, promissory note registers, etc. 58. Figuring mark-up as a percentage of sales price 61. Computing averages 66. Bank discount
6	27a. Entries for drafts and trade acceptances 34. Entries for costs or income applicable to a previous period 52. Operation of an adding machine or listing machine 55. How to prepare payrolls 65. Figuring compound interest
5	28a. Handling advances to salesmen and salesmen's traveling expenses 29. Contingent liabilities in balance sheet 36. Use of the cash-journal or cash-journal-ledger (commonly called a synoptic journal) 39. Goodwill and other intangible assets, such as patents 43. Accounting for manufacturing concerns 43a. Statements and reports for manufacturing concerns 59. Figuring commissions and brokerage 60. Figuring costs of express, freight, and parcel post shipments 73. How to figure turnover 74. Use of short methods in multiplication (aliquot parts, etc.)

Of the items listed in TABLE IV as having an index of significance of five or above the following were rated by the College Professors as less than five: items 28a, 36, 43, 43a, 55.

Accountants and Office Managers rated at less than the fifth decile only item 59.

Of the items in the combined rating which were below the fifth decile, none were considered by the College Professors as belonging above the fourth decile. On the other hand, the Accountants and Office Managers considered that the following should be at the fifth decile or above: items 32, 35, 40, 67, 43b, 43c.

Whereas the agreement between the two groups seems to be very close, it is obvious that the Accountants and Office Managers evaluated the items of the check list generally higher than did the College Professors of Accounting. It is apparent that the former group rated a higher percentage of the items of the check list as essential than did the College Professors. This is shown by the following tabulation:

TABLE VI

COMPARISON OF RATINGS UNDER ITEM 1 OF COLLEGE PROFESSORS
AND ACCOUNTANTS AND OFFICE MANAGERS

Number of items rated as "1" in which the deciles were the same for both groups	13
Number of items rated as "1" in which the deciles for the College Professors exceeded the other group	17
Number of items rated as "1" in which the deciles for the Accountants and Office Managers exceeded the other group.	32

Listing of Omitted Topics or Shortages.--Of even greater interest to the investigator than the evaluation of the topics listed on the check list are the suggestions from the respondents of topics which should be included and which were not listed in the Indianapolis courses of study.

In comments written on the questionnaires and in personal letters accompanying the questionnaires there were a number of suggestions made. Many of these were quite general in nature. From the entire list there were fourteen which were sufficiently specific to record. They have been listed in TABLE VII.

Because each of these items represents the opinion of only one of the respondents, it is not possible to add them to the items in TABLE V and declare that they constitute in the opinion of the respondents an ideal course of study. It would be necessary to re-submit the items in TABLE VII to the respondents for an evaluation before they could be so incorporated in the list of approved topics.

They do have value, however, because of the manner in which they were produced. They represent the studied judgment and impression of individuals who are in a position to observe the shortages or deficiencies existing among the product of the public high schools. They were listed after the individual had opportunity to check items representing the existing course of study. They should be given very careful consideration by teachers and committees undertaking to revise the bookkeeping course of study.

TABLE VII

TOPICS NOT LISTED IN INDIANAPOLIS HIGH SCHOOL COURSES
IN BOOKKEEPING WHICH ONE OR MORE RESPONDENTS
BELIEVED SHOULD BE TAUGHT

<u>Topic Suggested</u>	<u>By Whom</u>
Definition of Real and Nominal Accounts	1 professor
Budget making	1 professor
Student record keeping	1 professor
Home budgets and accounting	1 professor
Business English	1 accountant
Analysis of proprietorship section of balance sheet	1 professor
Difference between cash and accrual basis of accounting	1 professor
Analysis of statements	1 professor
Improvement of handwriting	1 professor
Interpretation of financial statements	1 accountant
Entries to correct errors	1 professor
Probable causes of errors in trial balance, such as transpositions, slides, cross posting, etc.	1 professor
Transportation charges and how allocated	1 accountant
Statement of application of funds	1 accountant

Suggestions and advice of college professors.--Professor P. O. Selby stated that the preparation of a working sheet has its importance generally over-rated. Professor H. W. Kendrick said, "Teach them double entry accrual accounting and you will have done a good job." Professor C. R. Miswonger reports, "The greatest weakness of students is in simple arithmetic, fractions, per cent, estimating and testing reasonableness of solutions to arithmetic problems."

Professor Geoffrey Carmichael advocates more problems on the closing of the books without ruling ledger accounts, and with balance sheets and statements of profit and loss required.

Professor H. D. Fasnacht said, "More than anything, we people in college want people better trained in mathematics."

Mr. Charles H. Langer is of the opinion that one can go too far in high school with many of the topics which he marked as essential and should be taught ("1").

Suggestions and advice of accountants and office managers.--Mr. D. L. Holsinger said, "We believe a pupil with accuracy, neatness and speed, plus a general knowledge of the fundamental principles of bookkeeping, has the best chance of obtaining a position and advancement."

Mr. James C. Rose stated, "It appears to me that the subjects listed are generally advanced for a high school student. From my experiences, many college graduates have not mastered these subjects. I have always considered that a high school course in bookkeeping was valuable for those students that would not specialize in accounting in college and that it would merely include fundamental double entry work. It is my opinion that under present circumstances an accountant needs a full background of general education before specializing in accounting. He should get this special accounting study in his last years of college. His high school and pre-business college work should be very broad and general."

Mr. John J. Joyce says, "Simplify and intensify the "

subjects taught." Mr. S. A. Tomlinson asks for more emphasis on the taking of trial balances.

Mr. R. B. Parrish suggests, ". . . a very thorough treatment of fundamentals (first twenty-five topics) rather than to cover the complete outline." Mr. H. L. Fahrney and Mr. Freeman A. Leas concur in this viewpoint. Mr. Harlan B. Livengood advocates a more thorough study of the cash-journal system, believing that separate purchase, sales, receipts, and disbursements journals are in most instances now obsolete. He continues, "Few new bookkeepers seem to know how to keep petty cash funds by the imprest system."

Mr. Gustave C. Klippel,--"My experience has shown that most high school graduates have a vague idea of many of these things, but no workable idea on any. Graduates start as beginners and should know the details and mechanics well."

Mr. E. D. Curtis suggests, "greater emphasis on simple applications of theory, such as sole proprietorship, rather than attempting to touch upon so many topics."

Mr. Carman G. Blough believes that a number of items in the check list are best treated in courses beyond the high school. He would exclude machine accounting entirely from the course. Training in bookkeeping machines may have vocational value, but does not aid in the understanding of bookkeeping.

Mr. Robert N. Dedaker writes, "Public accountants are inclined to assume that the scope of the bookkeeper's activities ends with the trial balance and that paper work beyond this point requires accounting training or experience. . . . Many of the

younger bookkeepers do not appear to realize that the books present accumulated data covering the purchasing, the receiving, the stock keeping, the timekeeping, the payroll, the shipping and credit and collection activities of the business even if all of these may be handled by a single individual."

"Another point," continues Mr. Dedaker, "which may be worthy of consideration might be a more thorough understanding of transportation charges. The average bookkeeper will have many transportation charges to handle throughout the year. Some of these should be absorbed in the company's expense while others should be charged to the purchaser of merchandise or deducted from the invoices of the suppliers. Many of the items are not handled properly by bookkeepers who might be fairly considered careful and efficient employees."

Mr. J. B. Baernkopf finds many of the items too difficult and advanced for high school study, although some of the problems related to accounting could be touched upon lightly. He mentions the growing importance of the statement of application of funds to show "what has become of the profit?" and believes that this statement could be taught to high school students in connection with the analysis of the balance sheet.

Attitude of Respondents toward Items 1 to 25.--There seemed to be no objection on the part of the respondents to the plan of separating items 1 to 25 and assuming that they would be automatically classified as "essential." Several respondents wrote "O.K." across these items. Mention has already been made of the suggestion which came from several respondents that the

schools would do well to emphasize these items, probably to the exclusion of the others.

Notice should be taken of the reference made by P. O. Selby¹ to item 4 in this group, viz., the preparation of a working sheet and classification of accounts. The work sheet is an accountant's device and there may be justifiable criticism for over-emphasizing its use in high school bookkeeping. Certainly, while the pupil is constructing work sheets he is not making entries, and the latter may be more important to him. It is recognized that the work sheet has value as a teaching device. Wheland supports this view, but seems to agree with Professor Selby in his general attitude when he said:

In technical bookkeeping it is probably necessary to present the work sheet since practically all of the textbooks have gone into lengthy discussions of its importance. Probably it is important, but surely not as important as these textbooks and many teachers would like us to believe. It is in most cases considerably over-taught. The importance is very much over-emphasized, probably due to its presence in the text material and the request for a work sheet in every problem after it is introduced. It is a good 'teaching device' but not a necessity for the small business.²

Of the second part of item 4, viz., classification of accounts, there was no criticism. The first item listed in TABLE VII (topics which were not listed, but which respondents thought should be taught) is "Definition of Real and Nominal Accounts." It must be assumed that the respondent making this suggestion was asking for a better mastery of the classification

¹See p. 44.

²Howard E. Wheland, "Practical Suggestions for Improving Instruction in the Technical Bookkeeping Course," The National Business Education Quarterly (Improving Instruction in Bookkeeping), IX-2, (December, 1940), p. 23.

of accounts. The use of the terms, Real and Nominal is probably not as acceptable as the terms, Assets and Equities and Revenue accounts.³ It is concluded, therefore, that the use of the work sheet is justifiable where it contributes to a mastery of the classification of accounts, but that it should not be over-taught to the exclusion of other materials which are more fundamental.

Attitude of Respondents toward Items 26 to 75.--In their informal comments, a number of the respondents advised that the high school bookkeeping work should be limited largely to the fundamentals of bookkeeping--to the taking of the trial balance--and should not invade the field of accounting. Yet, in evaluating the items under No. 26 (a to g) the respondents were almost unanimous in rating this item as "1". It is known that adjustment entries are rather difficult to teach to high school students. Sipe discovered that questions involving adjustments were missed most often in the Indiana high school bookkeeping contests conducted at Ball State Teachers College.⁴ The only conclusion which can be reached is that the respondents are of the opinion that a knowledge of adjustment entries is essential to perform the routine work of entering daily transactions. This suggests the principle that a bookkeeper will do better work as a bookkeeper if he has a fairly good knowledge of accounting principles.

³W. A. Paton, Essentials of Accounting. New York: The Macmillan Company, 1938, pp. 42-93.

⁴J. Marvin Sipe, "Results of Bookkeeping Instruction in Indiana High Schools as Revealed by Objective Tests Given at the District and State Contests in 1928 and 1929." Unpublished Master's Thesis, Indiana University, 1930.

Item 27 and Item 27a should probably receive further study before completing the revision of the course of study. Item 27, entries for promissory notes, has an index of significance of eight. Item 27a, entries for drafts and trade acceptances was given an index of significance of seven by the accountants, but only six by the college professors of accounting. Mr. Baernkopf said, "the student should know how to make entries for notes receivable, and particularly for drafts and trade acceptances." On his questionnaire, Mr. M. F. Watson, of the Bowes Seal Fast Corporation said, "We have never had an inexperienced employee come to us who had any knowledge whatever of making out sight draft bills of lading. They do not seem to comprehend what it is."

Item 28, petty cash funds kept by the imprest system, should, in the opinion of one college professor and three accountants, receive special emphasis. Its index of significance is seven. After developing the general principle governing the establishment and replenishment of an imprest fund, it would seem to be good pedagogy to apply this generalization to a new, but similar situation. This opportunity is offered in the problem of advances of expense funds to traveling salesmen (Item 28a). This item received an index of significance of only four from the college professors, but was evaluated sufficiently high by the accountants to keep it in the fifth decile for the combined group.

Item 32, making the balance sheet in double account form to show working capital, received a decile ranking of only three

from the college professors, five from the accountants, and four from the combined groups. From comments made on the questionnaires, it appears that the objection was to the construction of the balance sheet in the double account form. Mr. Blough rated the item as four, indicating that it had no value to high school students. Mr. Baerncopf believes that the student should learn something about working capital and how to determine its amount from an analysis of the balance sheet. It is problematic whether a separation of the double account form of the balance sheet from the working capital might have produced a higher rating for working capital.

Item 33, entries for transactions involving extraneous profits and losses (not to be included in the statement of profit and loss) received a low rating. Certain respondents indicated that they were not clear as to what was meant. Concerning item 34, entries for costs or income applicable to a previous period, Mr. Blough assumed that students would be taught to charge or credit these amounts to Surplus, which is the correct assumption. Mr. Blough stated, however, that the correct treatment is to carry these items through the current profit and loss account, provided they are not so large as to distort. Even though item 34 received a decile ranking of six, it should be said that both items 33 and 34 should be undertaken in a high school course in bookkeeping with some care. Item 34, especially, is affected by the rulings of the United States Federal Income Tax Division.

There was considerable unanimity about items 43, 43a, 43b, and 43c--all dealing with accounting for manufacturing establishments. A number of the accountants joined with Mr. Curtis in stating that these subjects must receive special treatment in courses beyond the high school and should not be attempted on the high school level. Some who rated them as essential qualified their rating by inserting the words, "on a very elementary basis." The final rating shows that, in the opinion of the respondents, a very elementary treatment could be given of manufacturing accounts (items 43 and 43a), but that cost accounting (item 43b) and anything beyond that should not be included in a high school course.

It is noted that the items related to business arithmetic were all considered significant. Percentage (item 56) and simple interest (item 64) were in the ninth decile. There was no difference of opinion as between the college professors and the accountants in the evaluation of these arithmetic items.

Item 52, the operation of an adding machine or listing machine, should in the opinion of both groups, be included in the course. None of the other items having to do with mechanized bookkeeping were considered significant. The group supported Mr. Blough's conclusion that machine operation is an occupation in itself and has nothing to do with learning bookkeeping.

Length of Time Required for Topics of High Significance.--Because the topics approved by the respondents for the

high school course in bookkeeping are mainly vocational, they will require more than one year of instruction for their mastery. There is evidence to support the conclusion that vocational bookkeeping should continue for at least two years.

In a survey which included the problems of bookkeeping teaching in the public schools of St. Louis and Pittsburgh, the survey staff, representing the Institute of Educational Research, Columbia University, recommended that the bookkeeping courses in these cities continue for two years.⁵ The survey staff operating in these cities agreed that one of the functions of education is to prepare persons to enter upon and to advance in an occupation. Bookkeeping will serve this function provided, says the report, ". . . . that the training has been well done and provided that it is related to the kind of bookkeeping that goes on in the business firms of the community."⁶

Availability of Text Materials.--An examination of two textbooks in accounting⁷ reveals that, for the most part, the topics of high significance are adequately treated. In the judgment of the investigator, the following topics would require materials other than that included in the two books examined:

⁵Hamden L. Forkner, A Study of Business Education in the Public Schools of St. Louis, Missouri and Pittsburgh, Pennsylvania Monograph 54, pp. 20, 33. Cincinnati: South-Western Publishing Company, 1941.

⁶Ibid., p. 34.

⁷Paul A. Carlson, Alva Leroy Prickett, and Hamden L. Forkner, 20th Century Bookkeeping and Accounting. op. cit. James O. McKinsey and Edwin B. Piper, Bookkeeping and Accounting. Cincinnati: South-Western Publishing Company, 1938. Vols. I and II.

Preparation of profit and loss statement with percentage analysis

Preparation of statements and reports with accompanying supporting schedules

Advances to Salesmen and salesmen's traveling expenses

Of the topics suggested by respondents which are not included in the check list, the following items are not properly treated in the two textbooks examined:

Business English

Analysis of proprietorship section of balance sheet
(Surplus Statement)

Cash and accrual basis of accounting

Probable causes of errors in trial balance

Transportation charges and how allocated

Statement of application of funds

Next Steps in Revising the Bookkeeping Course of Study.--

As pointed out on page 7 of this dissertation, the evaluation of the topics in terms of their vocational value is only one of the steps in the determining of a course of study which might merit the rating--outstanding. There is need for giving attention to the other aspects and objectives of bookkeeping as a subject in the secondary schools. Finally, there must be applied philosophical research of the highest order.

Even then, the work is not finished, for like education itself, the course of study is not static. Lomax referred to the need for testing deductively the results of studies of this kind when he said:

Most persons who have engaged in formal researching of bookkeeping instruction have stopped with their inductively derived generalizations, and have not undertaken the usually much more difficult task of deductively evaluating those

findings on the proving ground of practical experience. This situation is analogous to an airplane industry which would inductively arrive at certain supposed improvements in an airplane model, and then would not bother about deductively testing such changes under hard and practical flying conditions.⁸

Dr. Lomax points out that needed research into the content of bookkeeping courses is so comprehensive and costly that it can be carried out only by an organization with adequate financial backing.⁹

It is hoped that minor investigations of this kind may serve to test techniques and to suggest procedures.

⁸Paul S. Lomax, "Needed Research in Bookkeeping Instruction," The National Business Education Quarterly (Improving Instruction in Bookkeeping) IX - 2, (December, 1940), p. 11.

⁹Ibid., p. 13.

CHAPTER VI

CONCLUSIONS ARISING FROM THE STUDY

Findings

Conclusions Based on the Study.--Current periodical and recent textbook literature do not reveal a very widespread activity in the study of the content of courses of study in bookkeeping. It is common knowledge that teachers have a tendency to teach what is printed in the textbooks. For a subject as old as bookkeeping, the content has tended to become fixed. It has been refreshing, therefore, to attack a problem which, though difficult, is quite in need of discussion and solution.

The following conclusions seem to be supported by data included in the foregoing pages:

1. Where school administrators and supervisors are attempting to evaluate the items which make up a vocational course of study, they can expect business and professional people working in the same, or in a related field, to respond willingly to reasonable requests for assistance in such evaluation.
2. In submitting topics for such evaluation and in seeking to discover shortages in an existing course of study, it is better to submit, if possible, all topics for inclusion. For whatever the cause, the respondents are more likely to do a conscientious job in evaluating submitted topics than they are to suggest new and omitted topics.
3. Evaluations of the type reported here are not in themselves sufficient for determining the content of a course of study. They must be supplemented by philosophical research and by adherence to established standards for constructing acceptable courses of study.

4. In any future revision of the bookkeeping courses of study in the Indianapolis high schools, the items in TABLE V may be considered for inclusion with the knowledge that they have been rated essential by a majority of the fifty-two persons responding. The items in TABLE VII may be considered for inclusion with the knowledge that these are the only shortages suggested by any of the respondents.
5. In the opinion of the respondents, bookkeeping students should be taught to operate an adding or listing machine, but no other bookkeeping machines of any kind are recommended. In the opinion of the respondents, the operation of these machines constitute a separate occupation and bear no relation to the mastery of the theory of bookkeeping.
6. College professors of accounting would include fewer topics in high school bookkeeping than would accountants and office managers, but there is no notable difference of opinion between the groups in their appraisal of the topics of the bookkeeping course of study.
7. Current textbooks in bookkeeping for secondary schools would need to add a few items and give added treatment to a few more in order to cover all of the topics considered essential by the respondents.
8. On the basis of this study, it is concluded that the courses of study in the Indianapolis high schools contain, in the composite, some topics which should be omitted, and that some of the high schools should reduce the number of topics taught.
9. In practically no instance did a majority of the respondents condemn an item of the course of study as having no value to high school students. The issue seemed to be drawn on the question of expediency as to time and place to learn the principle or skill.
10. Topics related to business arithmetic received a uniformly high rating from the respondents, indicating that these knowledges have a high significance for bookkeepers.
11. The number of the topics of high significance and their vocational character are such that at least two years of bookkeeping instruction will be required to master the material.

Recommendations

Suggestions and Recommendations.--In keeping with the conclusions and findings of this study, the following suggestions and recommendations are made:

1. That a series of councils be held with business and professional men and women to discuss the topics as evaluated and reported in this study, and to evaluate the additional topics suggested for inclusion (see Table VII).
2. That a representative committee of teachers of bookkeeping take the findings of this series of councils and, in the light of criteria set up by the curriculum laboratory at Teachers College, Columbia University, attempt to construct a new course of study for bookkeeping for use in the Indianapolis high schools.
3. That pupils electing bookkeeping in the high schools be required to complete prerequisite courses in business arithmetic, and that they be encouraged to continue concurrently courses in mathematics.
4. That two years of high-school bookkeeping be offered in each of the Indianapolis high schools.
5. That studies similar to this one be conducted in other fields, i. e., for the development of courses for medical secretaries in cooperation with physicians and nurses; for the training of secretaries and registrars for colleges and universities, in cooperation with schools of higher learning; for the training of draftsmen, in cooperation with the engineering profession and with shop managers.

APPENDIX I

LIST OF PUBLIC HIGH SCHOOLS IN INDIANAPOLIS, INDIANA WITH HEAD OF COMMERCIAL DEPARTMENT IN EACH SCHOOL

1942

<u>Name of High School</u>	<u>Head of Commercial Department</u>
SHORTRIDGE HIGH SCHOOL	Howard T. Wood
MANUAL TRAINING HIGH SCHOOL	Wilbur S. Barnhart
ARSENAL TECHNICAL SCHOOLS	F. H. Gillespie
BROAD RIPPLE HIGH SCHOOL	*Winifred West
GEORGE WASHINGTON HIGH SCHOOL	Russell R. McClurg
CRISPUS ATTUCKS HIGH SCHOOL	Mrs. Anna B. Dawson
THOMAS CARR HOWE HIGH SCHOOL	*Margaret E. Forcht

*Chairman of Department

APPENDIX II

SAMPLE QUESTIONNAIRE USED IN THE STUDY

EVALUATIVE STUDY OF THE INDIANAPOLIS HIGH SCHOOL COURSES IN BOOKKEEPING

Conducted by Wilbur S. Barnhart

EXPLANATORY STATEMENT

We are asking for the assistance of a selected group of professional people in an evaluative study of the Indianapolis high school course in bookkeeping. Our assumption is that the subject of bookkeeping is taught in the high school principally because of its value in preparing pupils to fill certain clerical occupations, such as bookkeepers, cashiers, clerks (except clerks in stores), and similar positions. We consider that it has value, also, as a foundation course in general business education and as preparation for more advanced study in accounting and auditing.

Here is a list of topics or skills which are taught in some or in all of the Indianapolis high schools as a part of the bookkeeping or related courses. You are asked to evaluate each of these items as possible topics for study in high school bookkeeping classes.

Then, if there are any topics, principles, or skills which are not included in this list, and which you believe should be taught and emphasized in high school bookkeeping classes, will you please add these at the end of the check list.

Your evaluation of the topics, your listing of omitted topics, and any advice as to content or method in the teaching of this important subject will be of utmost value in the revision of our courses of instruction. An envelope is enclosed for your reply.

Respectfully yours

March 18, 1942

Wilbur S. Barnhart

Note: In order to reduce the number of items on the check list the following twenty-five topics are not included among the items to be rated. These topics are quite generally accepted as properly belonging in the bookkeeping course. Any dissenting opinion on these twenty-five topics should be presented on page four.

TOPICS AND UNITS OF INSTRUCTION GENERALLY ACCEPTED AS BELONGING IN A HIGH SCHOOL BOOKKEEPING COURSE

- | | |
|--|--|
| 1. Preparation of balance sheets | 14. Preparation of profit and loss statement with percentage analysis. |
| 2. Preparation of statements of profit and loss | 15. Pen and ink posting. |
| 3. Theory of double-entry bookkeeping | 16. Taking trial balances; pencil-footing accounts. |
| 4. Preparation of a working sheet and classification of accounts | 17. Ruling ledger accounts (pen and ink) |
| 5. How to close a ledger | 18. Reconciling bank accounts |
| 6. Use of purchases or invoice journals | 19. Figuring and checking extensions on invoices. |
| 7. Use of sales journals | 20. Writing checks and maintaining record of bank balances |
| 8. Use of cash receipts journals | 21. Checking postings |
| 9. Use of cash payments journals | 22. Ruling columns in books of original entry (pen and ink) |
| 10. Making entries for cash discounts | 23. Making deposit slips |
| 11. Sending monthly statements of account to customers | 24. Figuring inventories |
| 12. Handling and proving of cash | 25. How to make change |
| 13. Accounting for partnerships | |

TOPICS AND UNITS OF INSTRUCTION TAUGHT IN BOOKKEEPING CLASSES
IN THE INDIANAPOLIS HIGH SCHOOLS

Instructions for rating the topics--

Please evaluate the topics by writing the figure 1, 2, 3, or 4 after each item.

- Write: 1 -- if the topic is essential and should, in your opinion, be studied in high school.
 2 -- if the topic is essential, but is better learned on the job.
 3 -- if the topic is not essential, but could be studied in high school with profit.
 4 -- if the topic has no value and should not be taught in high school bookkeeping classes.

<u>Topic or Unit of Instruction</u>	<u>Rating</u>
26. How to make periodic adjustments for:	
a. Merchandise Inventories	
b. Deferred charges and expense inventories	
c. Deferred credits to income	
d. Accrued expenses	
e. Accrued income	
f. Estimated loss from bad debts	
g. Depreciation of fixed assets	
27. Entries for promissory notes, with and without interest	
a. Entries for drafts and trade acceptances	
28. Petty cash funds kept by the imprest system	
a. Handling advances to salesmen and salesmen's traveling expenses	
29. Contingent liabilities in the balance sheet	
30. Entries for notes receivable discounted	
31. Subsidiary ledgers and controlling accounts	
32. Making the balance sheet in double account form showing working capital	
33. Entries for transactions involving extraneous profits and losses (not included in the statement of profit and loss)	
34. Entries for costs or income applicable to a previous period	
35. Closing the ledger through a selling or trading account with net trading profit carried to profit and loss account	
36. Use of the cash-journal or cash-journal ledger (commonly called a synoptic journal)	

<u>Topic or Unit of Instruction</u>	<u>Rating</u>
37. Construction of a departmentalized statement of profit and loss	
38. Accounting for corporations	
a. Dividends---how declared and entries for	
39. Goodwill and other intangible assets, such as patents	
40. Liquidation of a business enterprise and the disposition of profits and losses in liquidation of partnerships	
41. Purchase of a going concern by another business firm	
42. Accounting for special partnerships and joint ventures	
43. Accounting for manufacturing concerns	
a. Statements and reports for manufacturing concerns	
b. Cost accounting	
c. The use of the manufacturing account and the closing of the ledger through manufacturing, selling, and profit and loss accounts	
44. The voucher system of accounting for cash disbursements	
45. Payroll problems and deductions for social security and other purposes	
46. Sinking funds	
47. Reserves for contingencies	
48. Comparative balance sheets	
49. Simple machine posting	
50. Preparation of statements and reports with accompanying supporting schedules	
51. Making contra entries in red ink	
52. Operation of an adding machine or listing machine	
53. Keeping memorandum books, such as petty cash records, promissory note registers, etc.	
54. Making of Federal Income Tax reports	
55. How to prepare payrolls	
56. Figuring of percentages	
57. Figuring of trade discounts	
58. Figuring mark-up as a percentage of sales price	

(Continue on next page)

Topic or Unit of Instruction	Rating
59. Figuring commissions and brokerage	
60. Figuring costs of express, freight, and parcel post shipments	
61. Computing averages	
62. Preparing graphs	
63. Computing depreciation	
64. Figuring simple interest	
65. Figuring compound interest	
66. Bank discount	
67. Theory of property insurance	
68. Life Insurance	
69. Operation of a continuous form-feed billing machine	
70. Operation of a key-driven calculator	
71. Operation of an automatic, or wheel-driven calculator.	
72. Operation of one or more bookkeeping machines	
73. How to figure turnover	
74. Use of short methods in multiplication (aliquot parts, etc.)	
75. Averaging accounts	

In your opinion, should any topic listed above receive greater attention in the high school bookkeeping course than it now seems to be receiving? _____ If the answer is "yes", please go back and encircle the number to the left of that topic.

Will you please list below any topic which you believe should be added, or any skill which should receive greater attention in the high school bookkeeping course.

76. _____

77. _____

78. _____

You are invited to make comments of a general nature. Use a separate sheet if necessary.

Signed _____ Official Position _____

Firm _____ Address _____

APPENDIX III

NAMES OF RESPONDENTS WITH POSITIONS HELD

I. College Professors of Accounting

Institution

103 P. O. Selby	State Teachers College, Kirksville, Mo.
105 Earl S. Dickerson	Eastern Illinois State Teachers College, Charleston, Illinois
107 Kermit Hart	Spring Hill College, Spring Hill, Ala.
110 H. W. Kendrick	University of Colorado, Boulder, Colo.
112 Cecil Puckett	University of Denver, Denver, Colo.
113 A. O. Colvin	Colorado State College of Education, Greeley, Colorado
114 Charles A. Fisher	John B. Stetson University, DeLand, Fla.
115 D. M. Beights	University of Florida, Gainesville, Fla.
118 L. E. Campbell	Emory University, Emory University, Ga.
119 A. L. Prickett	Indiana University, Bloomington, Ind.
120 Willard N. Anderson	Valparaiso University, Valparaiso, Ind.
121 Gertie Gray	Baker University, Baldwin City, Kansas
123 John G. Blocker	University of Kansas, Lawrence, Kansas
124 Robert D. Haun	University of Kentucky, Lexington, Ky.
126 E. A. Saliers	Louisiana State University, University, La.
130 W. V. Cheek	Southwest Missouri State Teachers College, Springfield, Missouri
138 C. R. Misownger	Miami University, Oxford, Ohio
140 R. B. Cowin	Lehigh University, Bethlehem, Pa.
144 W. E. Scott	University of Pennsylvania, Wharton School Philadelphia, Penn.
147 George E. Olson	University of South Carolina, Columbia, S. C.
149 Charles E. Crouch	Vanderbilt University, Nashville, Tenn.
152 Henry B. Cooley	West Virginia University, Morgantown, W. Va.
153 George A. Wagoner	Indiana University, Bloomington, Ind.
154 Geoffrey Carmichael	Indiana University, Bloomington, Ind.
155 L. G. Mitten	Manchester College, North Manchester, Ind.

II. Public Accountants

1 Robert N. Dedaker	38 Howard W. Painter
18 Alfred C. Baumgart	41 S. A. Tomlinson
26 James C. Rose	43 Roy J. Pile
31 Floyd H. Hoffman	44 Kermit B. Parrish
34 John S. Joyce	45 Harlan B. Livengood
37 J. B. Baerncopf	46 Freeman A. Leas

APPENDIX III

II. Public Accountants, Continued

55 C. G. Blough, New York City Manager, Arthur Andersen & Co.
57 E. D. Curtis, New York City Senior, Arthur Andersen & Co.

Office Managers

*Firm

2 F. P. McCune, American States Insurance Co.
3 W. W. Macy, Indianapolis Glove Company
5 Daniel Holsinger, State Life Insurance Company
9 Paul E. German, Hecker Products Company
51 A. B. Brethauer, Pitman-Moore Company
52 Gustave C. Klipple, Van Camp Hardware & Iron Co.
56 Unsigned
58 Charles H. Langer, Walton School of Commerce
69 Esther Gardner, Allison Engineering Company
70 Franklin Cook, Citizens Gas Company
75 Ray Meyers, Prudential Insurance Company
86 Robert Mathews, Austin Company
95 Unsigned

III. The following individuals expressed opinions in letters without completing the questionnaire:

Mr. Charles T. Coates, Indiana Mutual Insurance Company
Mr. H. L. Fahrney, American Bonding Company
Miss Ida S. Broo, Public Accountant

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(This certification-sheet is to be bound with the thesis. The major professor should have it filled out at the oral examination.)

Name of candidate:

Wilbur S. Barnhart.

Oral examination:

Date May 15, 1942.

Committee:

Albert Mock, Chairman

H. M. Whisler

David W. Thompson.

H. B. Bareille

Thesis title:

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BOOKKEEPING COURSES OF STUDY

IN THE INDIANAPOLIS PUBLIC

HIGH SCHOOLS.

Thesis approved in final form:

Date May 5, 1942

Major Professor Albert Mock

(Please return this certification-sheet, along with two copies of the thesis and the candidate's record, to the Graduate Office, Room 105, Jordan Hall. The third copy of the thesis should be returned to the candidate immediately after the oral examination.)